

NEW RECORD OF NEOTROPICAL KATYDID  
*CELIDOPHYLLA ALBIMACULA*  
(ORTHOPTERA: TETTIGONIIDAE) AND  
PARASITISM, FROM COSTA RICA<sup>1</sup>

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ABSTRACT: A live female specimen of neotropical katydid *Celidophylla albimacula* Saussure and Pictet was found in old secondary forest in northeastern Costa Rica. The find represents the second specimen of this species known to science, and the first female specimen. The female was weak, being parasitized by an unidentified species of Sarcophagidae.

Although the species richness of Orthoptera is high in the wet forests of tropical America, very little is known about the biology of individual species, including interactions with parasites. Some members of the Tettigoniidae are so scarce that only a few specimens of certain genera are known. A good example is *Celidophylla albimacula* Saussure and Pictet, a large leaf-like katydid of which, prior to the present discovery, only one specimen (male) had been collected (I.J. Cantrall, pers. comm.). The species was described by Saussure and Pictet in Godman and Salvin (1898) from a single male from Chontales, Nicaragua. The purpose of this note is to report (1) the discovery of the first known female of this katydid, and (2) the first record of this katydid being parasitized by a sarcophagid fly.

While censusing cicadas in an old secondary forest (dominated by *Goethalsia meiantha* trees — Tiliaceae) near Finca La Tirimbina, La Virgen, Heredia Province, Costa Rica, in the Premontane Tropical Wet Forest life zone (Holdridge, 1967), a weak but alive female *C. albimacula* (73 mm body length; 98 mm long including wing covers) was discovered in leaf litter on 12 August 1972 (10:00 A.M.). When discovered, the katydid appeared fresh, and there were no signs of attack by ants, suggesting that it had just fallen from the canopy. Several species of predaceous ants forage in the litter here. It was collected and placed in a clear plastic bag; the following morning several small dipterous larvae (second instars, about 50 in number) were noted crawling over the katydid (Fig. 1). The larvae were exiting from the katydid's body in the thoracic region, apparently disturbed at being removed from the forest habitat. A sample of the larvae, preserved in 70% ethanol, was identified as

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Figure 1. The only known female specimen of the neotropical katydid *Celidophylla albimacula*, showing second instar sarcophagid larvae on the thorax and wing covers.

Sarcophagidae, unknown genus. As very little is known about the systematics and biology of Neotropical Sarcophagidae, including the taxonomy of immature stages, (Souza Lopes, 1969), it is not possible to identify the sarcophagid further at this point. It is known, however, that some sarcophagids often parasitize Orthoptera (Souza Lopes, 1969). Owing to the fact that the katydid was alive when discovered, appendages intact and the larvae already second instars, it is very unlikely that they were scavengers. The mechanical disturbance of taking the infected katydid from the forest floor probably caused the larvae to exit before maturity. Unfortunately the remaining larvae did not develop to maturity so no adult flies were obtained. It is likely that the katydid was originally infected in the canopy of the forest, falling to the floor when weakened. Although nothing is known about the habits of *C. albimacula*, its appearance (brown-blotched bright green leaf-like wings) suggests that it is a canopy-dwelling species. As katydids in general can be specialized feeders (e.g., Gangwere, 1961) and the local tree species richness of tropical wet forests is high (e.g., Pires, Dobzhansky, and Black, 1953), it may not be unusual that *C. albimacula* is considered an extremely rare species, notwithstanding the canopy-dwelling habit making it difficult to observe. Despite repeated searches of the same area of forest floor over three successive years (continued cicada censuses), no other individuals of *C. albimacula* have been found.

## ACKNOWLEDGEMENTS

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## REFERENCES

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## INTERNATIONAL COMMISSION ON ZOOLOGICAL NOMENCLATURE ANNOUNCEMENT

The required six months' notice is given of the possible use of plenary powers by the International Commission on Zoological Nomenclature in connection with the following names listed by case number: (see Bull. Zool. Nom. 33, parts 3 & 4, 31 March 1977).

Z.N.(S.) 2157 *Goniurellia* Hendel, 1927 (Insecta, Diptera, TEPHRITIDAE): designation of type-species.

Z.N.(S.) 2170 *Pieris castoria* Reakirt, 1867 (Insecta, LEPIDOPTERA): proposed suppression.

Z.N.(S.) 2173 *Culex loewi* Giebel, 1862 (Insecta, Diptera, CULICIDAE): request for suppression so as to conserve *Toxorhynchites brevipalpis* Theobald, 1901.

Comments should be sent in duplicate (if possible within 6 months of the date of publication of this notice), citing case number to:

R.V. Melville, The Secretary, International Commission on Zoological Nomenclature, c/o British Museum (Natural History), Cromwell Road, LONDON, SW7 5BD, England.

Those received early enough will be published in the Bulletin of Zoological Nomenclature.

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The following Opinions have been published recently by the International Commission on Zoological Nomenclature

Opinion No. 1066 (Bull. zool. Nom. 33 (3 & 4) page 155) *Lyda alternans* Costa, 1859 under plenary powers given precedence over *Lyda inanis* Klug, 1808 (Insecta: Coleoptera).

Opinion No. 1073 (Bull. zool. Nom. 33 (3 & 4) page 172). Under plenary powers family name RIODINIDAE Grote, 1895 (Lepidoptera) to have precedence as from 1827 and ERYCINIDAE Swainson 1827 ruled invalid and placed on Official Index of Rejected and Invalid Family-Group Names in Zoology.

Opinion No. 1075 (Bull. zool. Nom. 33 (3 & 4) page 176) *Striglina* Guenee given precedence under plenary powers over *Daristane* Walker, 1859 (Lepidoptera, THYRIDIDAE).

The Commission cannot supply separates of Opinions.